

October 16, 2014

Dr. Cameron Goodwin, Director
Rhode Island Nuclear Science Center
16 Reactor Road
Narragansett, RI 02882-1165

SUBJECT: RHODE ISLAND ATOMIC ENERGY COMMISSION – NRC ROUTINE
INSPECTION REPORT NO. 50-193/2014-203

The U.S. Nuclear Regulatory Commission (NRC or the Commission) conducted an inspection from September 22–25, 2014, at the Rhode Island Nuclear Science Center Reactor facility (Inspection Report No. 50-193/2014-203). The enclosed report documents the inspection results which were discussed on September 25, 2014, with you, the Assistant Director, and the Chairman of the Rhode Island Atomic Energy Commission.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspector observed various activities in progress, interviewed personnel, and reviewed selected procedures and representative records. Based on the results of this inspection, no safety concern or noncompliance of requirements was identified. No response to this letter is required.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390, "Public inspections, exemptions, and requests for withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (Agencywide Documents Access and Management System (ADAMS)). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

C. Goodwin

- 2 -

Should you have any questions concerning this inspection, please contact Mr. Craig Bassett at 301-466-4495 or by electronic mail at Craig.Bassett@nrc.gov.

Sincerely,

/RA/

Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-193
License No. R-95

Enclosure:
NRC Inspection Report No. 50-193/2014-203

cc: Please see next page

cc:

Governor
222 State House Room 115
Providence, RI 02903

Dr. Yana K. Reshetnyak
Department of Physics
University of Rhode Island
East Hall, 2 Lippitt Road
Kingston, RI 02881

Dr. Clinton Chichester, Chairman
Rhode Island Atomic Energy Commission
College of Pharmacy
Pharmacy Building
7 Greenhouse Road
Kingston, RI 02881

Dr. Jack Breen, Chairman
Nuclear and Radiation Safety Committee
Providence College
Department of Chemistry and Biochemistry
549 River Avenue
Providence, RI 02918

Test, Research, and Training
Reactor Newsletter
202 Nuclear Sciences Center
University of Florida
Gainesville, FL 32611

Dr. Nancy E. Breen
Marine and Natural Sciences Building 226
Roger Williams University
One Old Ferry Road
Bristol, RI 02809

Dr. Bahram Nassersharif
Dean of Engineering
University of Rhode Island
102 Bliss Hall
Kingston, RI 02881

Dr. Howard Chun
Cranston High School East
899 Park Avenue
Cranston, RI 02910

Supervising Radiological Health Specialist
Office of Occupational and Radiological
Health
Rhode Island Department of Health
3 Capitol Hill, Room 206
Providence, RI 02908-5097

C. Goodwin

- 2 -

Should you have any questions concerning this inspection, please contact Mr. Craig Bassett at 301-466-4495 or by electronic mail at Craig.Bassett@nrc.gov.

Sincerely,

/RA/

Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-193
License No. R-95

Enclosure:
NRC Inspection Report No. 50-193/2014-203

cc: Please see next page

DISTRIBUTION:

PROB r/f
MNorris
XYin

RidsNrrDprPrta
MCompton

RidsNrrDprPrtb
PBlechman

ADAMS Accession No.: ML14274A536 *concurring via e-mail

NRC-002

OFFICE	NRR/DPR/PROB*	NRR/DPR/PROB
NAME	CBassett	KHsueh
DATE	10/1/2014	10/16/2014

OFFICIAL RECORD COPY

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Docket No: 50-193

License No: R-95

Report No: 50-193/2014-203

Licensee: Rhode Island Atomic Energy Commission

Facility: Rhode Island Nuclear Science Center Research Reactor

Location: Narragansett, Rhode Island

Dates: September 22–25, 2014

Inspector: Craig Bassett

Approved by: Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Enclosure

EXECUTIVE SUMMARY

Rhode Island Atomic Energy Commission Rhode Island Nuclear Science Center Reactor Facility NRC Inspection Report No. 50-193/2014-203

The primary focus of this routine, announced operations inspection was the onsite review of selected aspects of the Rhode Island Atomic Energy Commission (the licensee's) two megawatt Class I research reactor safety program including: (1) organizational structure and staffing, (2) review and audit and design change functions, (3) reactor operations, (4) operator requalification, (5) maintenance and surveillance, (6) fuel handling, (7) experiments, (8) procedures, and (9) emergency Preparedness. The review covered the period of time from the last U.S. Nuclear Regulatory Commission (NRC) inspection of these areas to the present. The licensee's program was acceptably directed toward the protection of public health and safety and in compliance with the NRC requirements.

Organizational Structure and Staffing

- The organization structure appeared to be in compliance with Technical Specification requirements.
- The present staffing level appeared to be adequate for current conditions.

Review and Audit and Design Change Functions

- The Nuclear and Radiation Safety Committee was meeting as required and reviewing the topics outlined in the Technical Specifications. Audits were being completed as required.
- Design changes were being evaluated in accordance with the requirements specified in Title 10 of the *Code of Federal Regulations* Section 50.59.

Reactor Operations

- Reactor operations, as well as operator cognizance of facility conditions during startup and routine operation, were acceptable.

Operator Requalification

- Operator requalification was being completed as required by the licensee's Operator Requalification Program and the program was being maintained up-to-date.
- Operators were receiving their biennial physical examinations as required.

Maintenance and Surveillance

- The program established and implemented by the licensee was being used to effectively complete maintenance activities at the facility.

- The surveillance program currently in use by the licensee satisfied Technical Specification requirements.

Fuel Handling

- Fuel movements were conducted in accordance with Technical Specification and procedural requirements.
- Fuel inspections were being completed annually as required.

Experiments

- The program for reviewing, authorizing, and conducting experiments satisfied Technical Specification and procedural requirements.

Procedures

- The procedural review, revision, and implementation program satisfied the requirements of Technical Specification Section 6.5, "Operating Procedures."

Emergency Preparedness

- The licensee maintained an effective emergency preparedness program through implementation of the Emergency Plan and the associated implementing procedures.

REPORT DETAILS

Summary of Facility Status

The Rhode Island Atomic Energy Commission's (RIAEC or the licensee) Rhode Island Nuclear Science Center (RINSC) two megawatt Class I research reactor continued to be operated in support of research, service, education, training, and surveillance. During the inspection, the reactor was operated to irradiate samples and for a tour.

1. Organizational Structure and Staffing

a. Inspection Scope (Inspection Procedure (IP) 69006

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of Sections 6.1, "Organization and Management," and 6.2, "Qualification of Personnel," of the RINSC Technical Specifications (TS), Amendment No. 30, dated December 19, 2013, were being met:

- Résumé of the facility Director
- RINSC organizational structure and staffing
- Résumé of the current Radiation Safety Officer
- Reactor Logbooks Numbers (Nos.) 59 and 60

b. Observations and Findings

The inspector reviewed the facility organization and staffing. It was noted that the organization had not changed since the previous inspection. As noted in previous inspection reports, there had been changes in several of the key positions at the facility. The individuals selected to fill the positions of Facility Director, Radiation Safety Officer, and Reactor Supervisor, were all relatively new to those positions. Nevertheless, a review of the background of each person indicated that they all had the appropriate work experience and educational background required by TS Sections 6.2.1 and 6.2.2. The organizational structure at the facility appeared to be in compliance with the TS.

It was noted that most staff members had collateral duties to perform at the facility. Despite this fact, the inspector concluded that staffing appeared to be adequate given the current level of operation at the facility. An increase in the workload would necessitate a larger staff.

c. Conclusion

The organizational structure appeared to be in compliance with TS requirements. The present staffing level appeared to be adequate for current conditions.

2. Review and Audit and Design Change Functions

a. Inspection Scope (IP 69007)

The inspector reviewed selected aspects of the following with respect to the review and audit program and design change activities to ensure compliance with TS Section 6.4, entitled "Review and Audit":

- Nuclear and Radiation Safety Committee (NRSC) Charter, Revision (Rev.) 3, approval dated November 15, 2013
- NRSC meeting minutes from March 2013 through the date of this inspection
- 50.59 screen/review forms for the latest proposed modifications or changes to the facility
- 50.59 screen/review forms pertaining to modifications or changes to facility procedures
- RINSC Operating Procedure AP-03, "Facility Modifications," Rev. 1, NRSC approval dated November 15, 2013
- RINSC Annual Report for the period from July 1, 2012, through June 30, 2013, submitted to the NRC on August 29, 2013
- RINSC Annual Report for the period from July 1, 2013, through June 30, 2014, submitted to the NRC on August 28, 2014

b. Observations and Findings

(1) Review and Audit Functions

The inspector reviewed the NRSC meeting minutes and associated records from March 2013 through the present. The records showed that meetings were being held and safety reviews and audits were conducted by various members of the NRSC or other designated persons as required and at the TS-required frequency. Topics of these reviews and audits were consistent with TS requirements to provide guidance, direction, and oversight for the facility, and acceptable use of the reactor.

(2) Design Change Functions

Through interviews with licensee personnel, the inspector determined that various changes had been proposed for implementation at the facility. However, none had progressed past the proposal stage and thus had not been submitted to the NRSC for review.

The inspector reviewed the revised 10 CFR 50.59 review process used at the facility. It was noted that the licensee had revised their procedure to provide additional guidance concerning the review of procedures using the 10 CFR 50.59 review and evaluation process. Also, a Screening Form had been developed to be used to determine whether or not a full

Enclosure

50.59 review and evaluation was required for any change being contemplated. The inspector noted that several facility procedures had recently been developed or revised but all the changes were minor in nature and did not require a 50.59 review.

c. Conclusion

The NRSC was meeting as required and reviewing the topics outlined in the TS. Audits were being completed as required. Design changes were being evaluated in accordance with 10 CFR 50.59 requirements.

3. Reactor Operations

a. Inspection Scope (IP 69006)

The inspector reviewed selected portions of the following documents to verify that the licensee was operating the reactor and documenting activities in accordance with TS Sections 6.1 and 6.2 and procedural requirements:

- Reactor Logbooks Nos. 59 and 60
- Periodic Maintenance Notebook containing the documentation of maintenance items
- Various RINSC Operating Procedures including: OP-01, "Reactor Operation Request;" OP-02, "RINSC Pre-Start Checkout;" OP-03, "Reactor Power Changes;" and, OP-04, "Abnormal Procedures"
- Selected Pre-Startup Check Sheet (NSC-1) forms
- Selected Reactor Operations Request (NSC-49) forms
- Selected RINSC Reactor Operations Data (NSC-18) forms
- Selected Shift Record Data Sheet (NSC-11) forms
- Selected Shutdown Check Sheet (NSC-1C) forms
- RINSC Annual Report for the past two reporting periods

b. Observations and Findings

The inspector reviewed and observed reactor operations and procedures including a pre-start checkout and reactor start-up. A senior reactor operator (SRO) and the Reactor Supervisor (also an SRO) were interviewed about the operation of the facility. Both appeared knowledgeable of their duties and were cognizant of facility conditions. Reactor operations were conducted in an appropriate manner and in accordance with procedure.

The inspector reviewed various forms that were required to be completed for reactor operations. The inspector also reviewed portions of the recent reactor logbooks to verify compliance with the staffing requirements of TS 6.1.2 and 6.1.3. The appropriate documentation was being completed and shift staffing was as required by the TS.

Enclosure

c. Conclusion

Reactor operations, as well as operator cognizance of facility conditions during startup and routine operation, were acceptable.

4. Operator Requalification

a. Inspection Scope (IP 69003)

The inspector reviewed selected aspects of the following to ensure compliance with the licensee's operator requalification program outlined in RINSC Operating Procedure AP-02, "Reactor Operator Requalification," Rev. 2, NRSC approval dated June 29, 2005:

- Reactor Logbooks Nos. 59 and 60
- Individual reactor operator (RO) and SRO requalification files containing copies of the following:
 - Operator Requalification Program Checklist forms
 - Annual Operational Requalification Exam forms
 - Biennial Operator Requalification Examinations
 - Letters from the NRC to the licensed operators documenting the issuance of an RO or SRO license
- Copies for each individuals' NRC Form 396, "Certification of Medical Examination by Facility Licensee"
- American National Standards Institute/American Nuclear Society 15.4-2007, "Selection and Training of Personnel for Research Reactors," Section 7, "Medical Certification and Monitoring of Certified Personnel"

b. Observations and Findings

There were three qualified SROs on staff at the facility. The licenses of the three operators were reviewed and determined to be current. It was noted that three other staff members had recently taken NRC Licensing Examinations; they were awaiting the results.

A review of the logs and records showed that training was being conducted in accordance with the licensee's requalification and training program. Procedure reviews and examinations had been documented as required. Information regarding facility changes and other relevant information had been routed to all licensed operators who then acknowledged their review of this information. The inspector verified that quarterly reactor operations, reactivity manipulations, other required operations activities, and Reactor Supervisor activities were being completed as required and the appropriate records were being maintained. Records indicating the successful completion of the annual operations tests and supervisory observations were also maintained. Biennial written exams were also being administered to the qualified operators as well. The inspector determined that the program was being maintained up-to-date.

Enclosure

The inspector also noted that all operators were receiving biennial medical examinations within the allowed time frame as required. No problems were noted.

c. Conclusion

Operator training and requalification was being conducted in accordance with the licensee's Operator Requalification Program. Operators were receiving their biennial physical examinations as required.

5. Maintenance and Surveillance

a. Inspection Scope (IP 69006, 69010)

The inspector reviewed the following to verify compliance with TS Section 3.0, "Limiting Conditions for Operation," and to determine if the periodic surveillance tests on safety systems were performed as stipulated in TS Section 4.0, "Surveillance Requirements":

- RINSC Maintenance 2014, Rev. 0 (spreadsheet)
- Instrumentation Calibration Notebook and associated documents including:
 - Nuclear Instrument Calibration forms
 - Instrument Calibration of Area Monitor (NSC-46) forms
- Maintenance Notebook and associated documents including:
 - RINSC Emergency Generator Maintenance Checklist (NSC-44) forms
 - Alarm, Scram, and Interlock Check Sheet (NSC-1A) forms
- Reactor Data Notebook and associated documents
- RINSC Annual Report for the past two reporting periods

b. Observations and Findings

(1) Maintenance

The inspector reviewed licensee's tracking mechanism for maintenance and surveillance activities. The inspector verified that these activities were completed in accordance with TS and licensee procedures, and that the results met procedural requirements.

The maintenance records indicated that problems were addressed and preventive maintenance operations completed as required by procedure. Records showed that routine maintenance activities were conducted at the required frequencies and in accordance with the TS and/or the applicable procedure.

Enclosure

(2) Surveillance

The inspector reviewed surveillance records including nuclear instrumentation calibration forms, shim safety blade inspection forms, reactivity worth calculation forms, and alarm, scram, and interlock check sheets. The data recorded in the reactor logbooks and on the surveillance records indicated that the verifications and calibrations had generally been completed on schedule and in accordance with licensee procedures. The results reviewed by the inspector were noted to be within the TS and procedurally-prescribed parameters. Maintenance and surveillance activities ensured that equipment remained consistent with the Safety Analysis Report and TS requirements.

c. Conclusion

The program for conducting maintenance and for completing surveillance activities was being carried out in accordance with TS and procedural requirements.

6. Fuel Handling and Movement

a. Inspection Scope (IP 69009)

The inspector reviewed the following to verify compliance with TS 4.9.b and 6.9.1.g, which require visual inspection of fuel elements every 5 years on a rotating basis and maintenance of records associated with fuel inventories and transfers, respectively:

- Reactor Logbooks Nos. 59 and 60
- Inspection Procedure IP-01, "Core Element Movement and Inspection," Rev. 0, NRSC approval dated December 4, 2009
- Reactor Data Notebook; fuel element inspection sheet and 10 year forecast

b. Observations and Findings

The inspector reviewed the licensee's fuel handling process and verified that fuel was moved according to an established protocol and inspected in accordance with a specific inspection schedule. The inspector reviewed documentation of selected fuel movements and interviewed facility staff about the process. A specific plan for each series of fuel movements had been developed prior to the activity and was used for core refueling, core rearrangement, and performing inspections of fuel elements. It was noted that fuel inspections had been completed and that the inspection documents contained descriptions of fuel conditions, as well as any discolorations and markings.

The inspector also compared the location of fuel elements in the reactor core with the information maintained on the fuel status board in the control room and

Enclosure

on the fuel movement sheets for the latest core, Low Enrichment Uranium (LEU) Core No. 6. No problems or anomalies were noted.

c. Conclusion

Fuel movements were conducted in accordance with written procedures that met TS requirements. Fuel inspections were being completed annually as required.

7. Experiments

a. Inspection Scope (IP 69005)

The inspector reviewed selected aspects of the following to verify that the licensee was in compliance with TS Sections 3.1, 3.8, 4.1, and 4.8:

- Reactor Logbooks Nos. 59 and 60
- 2014 Operating Data Notebook – Volume 1 of 1
- Experimental administrative controls and precautions
- Various RINSC Operating Procedures including: OP-01, "Reactor Operation Request;" OP-02, "RINSC Pre-Startup Checkout;" OP-03, "Reactor Power Changes;" XP-01, "Reactor Experiment Request;" XP-02, "Reactor Experiment Approval;" XP-03, "Rabbit Irradiations;" XP-04, "Incore Irradiations;" XP-10, "Dry Irradiation Facility Irradiations;" and, XP-12, "Gamma Tube Irradiations"

b. Observations and Findings

The majority of the experiments conducted at the facility were ones that have been in place for several years. However, since the last inspection in this area, four new experiments had been reviewed and approved. The experiments involved irradiation and activation of various materials including magazine covers, borated aluminum, borated plastic, and paper from car oil filters after the filters had been used. The inspector verified that each of the experiment proposals included a discussion of the proposed experiment, as well as the hazards involved and the anticipated results. The experiments had been reviewed and approved by the reactor staff and were subsequently reviewed and approved by the NRSC as required.

The inspector verified that the appropriate irradiation request forms for the various operations were completed and approved as required. The inspector also noted that the experiments that had been conducted using approved methods and with the cognizance of the SRO on duty in accordance with TS and procedural requirements. The experiments were documented on the appropriate forms and in the operations log as required. Engineering and radiation protection controls were implemented as required to limit exposure of the workers handling the irradiated samples.

Enclosure

c. Conclusions

The program for reviewing, authorizing, and conducting experiments satisfied TS and procedural requirements.

8. Procedures

a. Inspection Scope (IP 69008)

To verify that facility procedures were being prepared, reviewed, revised, and implemented as required by TS Section 6.5, "Operating Procedures," the inspector reviewed selected aspects of:

- Reactor Logbooks Nos. 59 and 60
- RINSC Operating Procedure AP-03, "Facility Modifications," Rev. 1, NRSC approval dated November 15, 2013
- NRSC meeting minutes from March 2013 through the date of this inspection

b. Observations and Findings

Procedures had been developed for the safe, routine operation of the reactor. Records showed that procedures for potential malfunctions (e.g., radioactive releases and contaminations, and abnormal events) had also been developed and were available. The inspector noted that substantive procedural changes were being reviewed and approved by the NRSC as required by TS.

Through observation of various activities at the facility, including reactor operation and sample handling, the inspector determined that licensee personnel conducted activities in accordance with applicable procedures. Experimenter personnel also followed procedures as required.

c. Conclusions

The procedural review, revision, and implementation program satisfied TS Section 6.5 requirements.

9. Emergency Preparedness

a. Inspection Scope (IP 69011)

The inspector interviewed staff members, reviewed the following documents, and visited the support organization facility discussed below to verify compliance with regulatory requirements and the RINSC Emergency Plan, Rev. 4, NRSC approval dated June 24, 2013:

- RINSC Emergency Procedure EP-01, "Emergency Plan Implementing Procedures," Rev. 2, dated July 29, 2013
- Documentation of Emergency Communication Tests conducted with various support agencies
- Forms documenting the completion of annual Emergency Supply Inventories (NSC-83)
- Documentation of emergency training and drills conducted during the past two years
- Letter of Agreement between Narragansett Police Department and RINSC, signed by Mr. M. J. Davis and by Chief Hoxie on December 22, 2011
- Letter of Agreement for Medical Services, from John B. Murphy MD, Vice President of Medical Affairs, Rhode Island Hospital, to Mr. T. Tehan, RIAEC, dated February 11, 2012
- Letter of Agreement between Narragansett Fire Department and RINSC, signed by Mr. M. J. Davis and Chief J. Cotter dated December 16, 2011

b. Observation and Findings

The inspector reviewed the Emergency Plan in use at the reactor and verified that it was being reviewed biennially as required. The inspector reviewed the associated implementing procedures as well, and noted that they were also reviewed biennially and revised as needed.

Through records review and interviews with staff personnel (e.g., emergency responders), the inspector determined that they were knowledgeable of the proper actions to take in case of an emergency. Training for these individuals was accomplished annually through evacuation and emergency drill participation. Training for support organization personnel was provided whenever those organizations were available and/or requested such training.

The documentation of the training and drills conducted during the past 2 years was reviewed. Through drill scenarios and records review, and personnel interviews, off-site emergency responders were determined to be knowledgeable of the proper actions to take in case of an emergency. Emergency and evacuation drills had been conducted annually as required by the Emergency Plan. Critiques following each drill had been conducted as required and the results documented. Recommendations were made to correct any deficiencies noted during the drill.

The inspector verified that the letters of agreement that had been established between the RINSC facility and the Narragansett Police and Fire Departments remained in effect. These agreements stipulated that police and fire personnel would respond during an emergency and would provide support for the facility. The inspector also verified that the agreement between the reactor facility and the Rhode Island Hospital remained in effect. That agreement indicated that the

Enclosure

hospital would provide RINSC personnel with needed support in case of any event involving a medical emergency.

Communications capabilities with support groups were acceptable and the various items of equipment (e.g., telephones and the building public address system) were in use daily. Portable radios were also available for use as needed and were checked annually. Emergency call lists had been revised and updated as needed and were available in the control room and in various areas around the facility as required, as well as in the Emergency Support Center (ESC).

The inspector visited the facility ESC located in a separate building and observed the emergency supplies, instruments, and information maintained in the locker located there in accordance with the Emergency Plan. The inspector and the RSO conducted an inventory of the supplies in the locker to verify that the needed items were there. The licensee also maintained records indicating that the emergency supplies were inventoried on an annual basis as part of the surveillance program required by the Emergency Plan.

The inspector and the RINSC Facility Director visited the Emergency Operations Center (EOC) of the Rhode Island Emergency Management Agency (RIEMA) located in Cranston, RI, and met with three individuals who would respond to radiological and other emergencies that might occur in the state. The RIEMA EOC appeared to be well equipped and set-up to handle all types of emergencies.

c. Conclusion

The licensee maintained an effective emergency preparedness program through implementation of the Emergency Plan and the associated implementing procedures.

10. Follow-up on Previously Identified Item

a. Inspection Scope (IP 92701)

The inspector reviewed the licensee's actions taken in response to an NRC-identified Unresolved Item (URI) and two Inspector Follow-up Items (IFIs).

b. Observation and Findings

- (1) URI 50-193/2013-202-01 – Follow-up on the issue of digital instrumentation and control modifications to the facility.

During an NRC inspection in September 2013, it was noted that various 10 CFR 50.59 reviews dealt with digital instrumentation and control modifications made at the facility. The licensee had reviewed these changes under the requirements in 10 CFR 50.59, and concluded that the changes did not require prior NRC approval. The design change review

Enclosure

had been conducted as directed by procedure and had been reviewed and approved by the NRSC. However, during the inspection, the inspectors discussed with the licensee whether the modifications had introduced the possibility of a common cause failure and whether the newly installed equipment was of high quality. This issue was also discussed during a conference call with the licensee and other NRC staff members on October 23, 2013. The licensee was informed that this issue would be tracked as a URI.

During this inspection the inspector reviewed this issue. The inspector observed reactor operations and discussed various control functions with the licensee. Because this issue of digital instrumentation and control is under review by NRC Headquarters staff personnel, this issue remains open.

- (2) IFI 50-193/2014-201-01 – Follow-up on the licensee's actions to initiate a new person in the position of Radiation Safety Officer for the facility.

During an earlier inspection in March 2014, it was noted that the organizational structure was in compliance with the TS. However, because the new RSO had not yet officially reported for duty at the facility at the time of that inspection, the inspector opened an inspector follow-up item (IFI) to verify that the position was filled on a permanent basis.

During this inspection it was noted that the individual who had been hired as the RSO had reported for duty at the facility and was actively engaged in facility and campus radiological work. As noted in Item 1 (Organizational Structure and Staffing) of this report, the individual appeared to have the appropriate qualifications and work experience required by the TS. This issue is considered closed.

- (3) IFI 50-193/2014-201-02 – Follow-up on the licensee's actions to ensure the completion of an annual review of the facility radiation protection program.

During the inspection in March 2014, the licensee was reminded that 10 CFR 20.1101(c) requires the licensee to conduct an annual review of the facility radiation protection (RP) program. At RINSC that review had typically been completed by the RSO and had last been completed in early 2013. Since there had not been a permanent RSO at the facility since late 2013, no review of the RP program had been completed as of the date of that inspection. The Facility Director indicated that she was going to have the person who was recently hired to fill the RSO position complete that review. The inspector opened an IFI to verify the adequate completion of this annual review.

During this inspection the inspector reviewed this issue to determine what actions the licensee had taken. It was noted that the RSO had completed

Enclosure

an audit of the RP program which was dated March 27, 2014. The audit appeared to be adequate and various deficiencies were corrected as a result. This issue is considered closed.

c. Conclusion

One URI and two IFIs were reviewed. The URI remains open but the two IFIs were closed.

11. Exit Interview

The inspector presented the inspection results to licensee management at the conclusion of the inspection on September 25, 2014. The inspector described the areas inspected and discussed in detail the inspection observations. The licensee acknowledged the findings presented and did not identify as proprietary any of the material provided to or reviewed by the inspector during the inspection.

PARTIAL LIST OF PERSONS CONTACTED

Licensee Personnel

C. Chichester	Chairman, Rhode Island Atomic Energy Commission
M. Damato	Health Physics Technician and Principle Reactor Operator
J. Davis	Assistant Director, Rhode Island Nuclear Science Center
C. Goodwin	Director, Rhode Island Nuclear Science Center
B. MacGregor	Facility Engineer/Senior Reactor Operator
P. Martin	Reactor Supervisor/Senior Reactor Operator
S. Nam	Radiation Safety Officer

Other Personnel

P. D'Abbruccio	State Radiological Officer, Rhode Island Emergency Management Agency
C. Waring	Supervising Radiological Health Specialist, Office of Facilities Regulation, Department of Health, State of Rhode Island
J. Washburn	Supervisor, Administration and Technical Services, Rhode Island Emergency Management Agency

INSPECTION PROCEDURES USED

IP 69003	Class 1 Research and Test Reactor Operator Licenses, Requalification, and Medical Examinations
IP 69006	Class 1 Research and Test Reactors Organization and Operations and Maintenance Activities
IP 69007	Class I Research and Test Reactor Review and Audit and Design Change Functions
IP 69009	Class 1 Research and Test Reactors Fuel Movement
IP 69010	Class 1 Research and Test Reactors Surveillance
IP 69011	Class 1 Research and Test Reactors Emergency Preparedness
IP 92701	Follow-up on Previously Identified Items

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-193/2014-201-01	IFI	Follow-up on the licensee's actions to initiate a new person in the position of Radiation Safety Officer for the facility.
--------------------	-----	--

50-193/2014-201-02	IFI	Follow-up on the licensee's actions to ensure the completion of an annual review of the facility radiation protection program.
--------------------	-----	--

Discussed

50-193/2013-202-01	URI	Follow-up on the issue of digital instrumentation and control modifications to the facility.
--------------------	-----	--

LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	Agencywide Document Access Management System
EOC	Emergency Operations Center
ESC	Emergency Support Center
IFI	Inspector Follow-up Item
IP	Inspection Procedure
NCV	Non-Cited Violation
Nos.	Numbers
NRC	U.S. Nuclear Regulatory Commission
NRSC	Nuclear and Radiation Safety Committee
NSC	Nuclear Science Center
RIAEC	Rhode Island Atomic Energy Commission
RIEMA	Rhode Island Emergency Management Agency
RINSC	Rhode Island Nuclear Science Center
RO	Reactor Operator
RP	Radiation Protection
RSO	Radiation Safety Officer
SRO	Senior Reactor Operator
TS	Technical Specification
URI	Unresolved Item

Enclosure